

4.5 SOCIOECONOMICS

Any sudden influx of capital or employment, such as a large construction project, to a region will impact the existing socioeconomic environment to some degree. The response of socioeconomic factors, such as employment, income, population, housing, and community services are interrelated. This section describes the potential effects of the Tucson Electric Power Company (TEP) Sahuarita-Nogales Transmission Line Project on the existing socioeconomic environment of the region of influence (ROI) for Pima and Santa Cruz Counties.

Methodology

Socioeconomic impacts are addressed in both direct and indirect impacts. Direct impacts are changes that can be directly attributed to the proposed action, such as changes in employment and expenditures from the construction and operation of the proposed action. Indirect impacts to the ROI occur based on the direct impacts from the proposed action. For example, for this analysis, the term “direct jobs” refers to the employment created by the project and “direct income” refers to project workers’ salaries. The term “indirect jobs” refers to the jobs created in other employment sectors as an indirect result of new employment at the construction site and “indirect income” refers to the income generated by the new indirect jobs. Two factors indirectly lead to changes in employment levels and income in other sectors throughout the ROI: (1) the changes in site purchase and non-payroll expenditures from the construction and operation phases of the project, and (2) the changes in payroll spending by new employees. The total economic impact is the sum of the direct and indirect impacts.

The direct impacts estimated in the socioeconomic analysis are based on project summary data developed by the U.S. Department of Energy (DOE) in conjunction with TEP’s contractors and representatives. Total employment and earnings impacts were estimated using Regional Input-Output Modeling System multipliers developed specifically for the TEP Sahuarita-Nogales Transmission Line Project ROI by the U.S. Bureau of Economic Analysis (BEA). BEA is part of the U.S. Department of Commerce’s Economics and Statistics Administration and is responsible for providing Gross Domestic Product and economic accounts data for the country. These multipliers are developed from national input-output tables maintained by BEA and adjusted to reflect regional trading patterns and industrial structure. The tables show the distribution of the inputs purchased and the outputs sold for each industry for every county in the United States. The multipliers for this analysis were developed from the input-output tables for the two counties comprising the ROI. The multipliers are applied to data on initial changes in employment levels and earnings associated with the proposed project to estimate the total (direct and indirect) impact of the project on regional earnings and employment levels.

During the public scoping process for the Draft Environmental Impact Statement (EIS), several commentors expressed concern that existence of the proposed transmission line would negatively impact real property values. In this context, any decrease in property values would be perception-based impact, that is, an impact that does not depend on actual physical environmental impacts resulting directly from the proposed project, but rather upon the subjective perceptions of prospective purchasers in the real estate market at any given time. Courts have long recognized that such subjective, psychological factors are not readily translatable into quantifiable impacts. See, for example, *Hanly v. Kleindienst*, 471 F.2d 823, 833 n.10 (2d Cir. 1972), *cert. denied*, 412 U.S. 908, (1973). People do not act consistently in accordance with negative perceptions, and one person’s negative perception might be another’s positive. Also, perceptions of value may change over time, and perceptions of value are affected by a host of other factors that have nothing to do with the proposed project. Accordingly, any connection between public perception of a risk to property values and future behavior would be uncertain or speculative at best, and therefore would not inform decision making.

There have been studies of the impact of transmission lines and property values in other geographic areas. See, for example, discussion of these studies in the *Environmental Impact Statement for Schultz-Hanford Area Transmission Line Project* (DOE 2002). Based on these studies, DOE can conclude only that, at worst, it is possible that there might be a small negative economic impact of short duration to some properties from the project, and that the impact on value would be highly variable, individualized, and unpredictable. The studies at most conclude that other factors, such as general location, size of property, and supply and demand factors, are far more important criteria in determining the value of residential real estate.

Accordingly, while DOE recognizes that a given property owner's value could be affected by the project, DOE has not attempted to quantify theoretical public perceptions of property values should the proposed project be built.

The importance of the actions and their impacts is determined relative to the context of the affected environment, or project baseline, established in Section 3.5. The baseline conditions provide the framework for analyzing the importance of potential economic impacts that could result from the project.

4.5.1 Socioeconomic Impacts from the Western, Central, and Crossover Corridors

The construction costs of each of the three action alternatives would be roughly similar, approximately \$70 million plus or minus \$7 million. The labor costs would be approximately the same regardless of the alternative selected, and each route would require approximately the same average and peak workforce and the same period of time to construct (TEP 2003). The majority of the impacts to regional social and economic resources would be directly attributable to the size of the workforce and the total income earned. The number of jobs and amount of income indirectly created by a project is determined by the amount of new direct income spent within the ROI. The model analyzes the financial transfers associated with the action and provides the impacts in terms of income and employment. Therefore, the majority of the socioeconomic impacts from each alternative would be the same. The differences in overall project cost would affect the amount of tax revenue generated by each alternative. The greatest amount of tax revenue would be generated by the Crossover Corridor, while the Central Corridor would generate the least amount of tax revenue for local communities.

As discussed above, the majority of the socioeconomic impacts from each alternative would be the same. The construction of the proposed transmission line, the modification of the existing South Substation, and the construction of the new Gateway Substation would require an average construction workforce of 30 individuals, with peak workforce levels reaching 50 individuals for short periods of time. The project is currently scheduled to be completed 12 to 18 months after construction begins. The most recent data available indicate that the average annual salary for construction workers employed in electrical transmission line construction within the ROI was \$38,327 (CBP 1999a). Total new direct income generated by the proposed transmission line construction would range from an estimated \$1.7 million to \$2.9 million. The final figure would depend on the duration of peak workforce employment. Should the average level of 30 individuals be used throughout, the amount of new direct income would be an estimated \$1.7 million. For each month that peak construction levels of 50 individuals are employed, total new direct income would increase by an estimated \$64,000. The scenario generating the greatest economic benefit to the ROI would be employment of peak construction levels for the 18-month duration of the project. In this scenario, an estimated \$2.9 million in new direct income would be generated.

The average number of direct jobs created by the project, 30, would lead to the indirect creation of approximately 31 additional jobs in other sectors throughout the ROI for the duration of the project. The majority of these new indirect jobs would be created in the service and retail sectors of the local economy as most of the disposable income generated by the project would be spent in these sectors. Peak

construction levels of 50 workers could increase the number of indirect jobs created to 52; however, the short duration of construction and the inherent temporary nature of the use of peak workforces would most likely keep the number of indirect jobs created closer to 31. These new indirect jobs would generate an additional \$1.5 million in income during the 18-month construction period. New indirect income could reach a maximum of \$2.6 million, should peak construction levels be used for the full duration of the project.

Depending on the length of time that peak construction levels are utilized, the total number of jobs created by construction of the TEP Sahuarita-Nogales Transmission Line Project would range from 61 to 102 jobs. The total income generated by the project would be at least \$3.2 million with the maximum possible being \$5.5 million. The additional revenue would benefit the region with an influx of capital.

Though the unemployment levels of the ROI are comparatively low at 3.2 percent, no difficulties would be experienced in filling the jobs generated by this project. The unemployment level for Santa Cruz County is 13.8 percent, which is very high, and the majority of the jobs could be filled from unemployed residents of this county. Also, the size of the workforce throughout the ROI shows that approximately 12,750 people are unemployed, which is sufficient to fill the maximum of 102 jobs that could be created by this project. Therefore, it is expected that no permanent influx of population to the ROI would be required to staff the jobs generated by this project. Since no population influx is expected to result, no new stresses would be applied to community services in the area. Existing services would be sufficient to accommodate any needs generated by this project.

Upon completion of the construction, the construction workforce would no longer be employed by this project and all indirect jobs that would be attributable to the project would no longer exist. This would not be a problem, however, for two reasons. The first is that it would be a return to current employment levels in the ROI with the exception of the extra revenue generated by the project. The second is that construction, by nature, is a temporary form of employment. Construction workers only work on a job until the project is completed and then they move on to the next project.

Operation of the facilities would require between one and five employees for maintenance, including repairs, and inspection of the facilities. The inspection and maintenance work would only occur on an occasional basis and the employees required would already be employed in this capacity within the company. No new jobs would be generated, therefore no socioeconomic impacts are expected from the operation of the facility.

The presence of a new transmission line in the Coronado National Forest would impact current uses to a certain degree. Presently, the U.S. Department of Agriculture Forest Service (USFS) generates revenue from the use of the forest and allocates 25 percent of that revenue to the State of Arizona under the 25 Percent Fund payments to states (PTS). USFS also provides Payment in Lieu of Taxes (PILT) to the state since Federal lands are not obligated to pay property taxes. The state then allocates the money to the counties based on the locations of the forests. Any impact to the forest that could affect the amount of revenue generated would affect the amount that counties receive from PTS and PILT. The proposed corridors would not reduce the amount of land available for timber use (USFS 2001b), the main source of revenue for the forests, but could potentially impact recreational use. This could have a minor influence on the overall revenue generated and slightly reduce the amount that Pima and Santa Cruz Counties receive from PTS and PILT.

New Transmission Line ROW and Access Roads

The TEP construction alternatives include acquiring easements for approximately 57 to 65 mi (92 to 105 km) of a new 345-kV transmission line right-of-way (ROW). The new ROW would either follow

existing utility corridors or be routed in a new corridor location and would be 125 ft (38 m) in width. TEP would utilize existing access roads where possible; however, it is anticipated that additional access road easements would need to be acquired for each corridor.

Affected landowners would be offered market value established through the appraisal process for the transmission line and/or access road perpetual easements. The appraisal process takes all factors affecting value into consideration including the impact of transmission lines on property value. The appraisals may reference studies conducted on similar properties to add support to valuation considerations. The strength of any appraisal is dependent on the individual analysis of the property, using neighborhood-specific market data to determine market value.

TEP's transmission line easements would encumber the ROW area with land use limitations. Typical transmission line easements require the right to clear the ROW and to keep it clear of all trees, brush, vegetation, other structures, and fire and electrical hazards. The landowner can usually grow most crops with certain height restrictions or graze livestock. Tree and crop height and access to the ROW must be controlled to maintain safe distances.

The impact of introducing a new ROW for transmission towers and lines can vary dramatically depending on the placement of the ROW in relation to the property's size, shape, and location of existing improvements. A transmission line may diminish the utility of a portion of property if the line effectively severs this area from the remaining property (severance damage). Whether a transmission line introduces a negative visual impact is dependent on the placement of the line across a property as well as each individual landowner's perception of what is visually acceptable or unacceptable.

If the transmission line crosses a portion of the property in agricultural use such as pasture or cropland, little utility is lost between the towers, but 100 percent of the utility is lost within the base of the tower. Towers may also present an obstacle for operating farm equipment, and controlling weeds at tower locations. To the extent possible, new transmission lines are designed to minimize the impact to existing and proposed (if known) irrigation systems. If the introduction of a transmission line creates a need to redesign irrigation equipment or layout, TEP would compensate the landowner for this additional cost. These factors as well as any other elements unique to the property are taken into consideration to determine the loss in value within the easement area, as well as outside the easement area in cases of severance.

If TEP acquires an easement on an existing access road and the landowner is the only other user, market compensation is generally 50 percent of full fee value or something less than 50 percent if other landowners share the access road use. For fully improved roads, the appraiser may prepare a cost analysis to identify the value of the access road easement. If TEP acquires an easement for the right to construct a new access road and the landowner has equal benefit and need of the access road, market compensation is generally 50 percent of full fee value. If the landowner has little or no use for the new access road to be constructed, market compensation for the easement is generally close to full fee value. If TEP acquires an easement of Federal or state land, TEP would pay a usage fee.

4.5.2 Socioeconomic Impacts from the No Action Alternative

Under the No Action Alternative, TEP would not build the proposed transmission line and associated facilities as proposed in this EIS. No changes to the existing employment levels would occur beyond the existing trends (described in Section 3.5); no new income or tax revenue would be generated beyond existing trends; and no additional demands would be placed on community services in the ROI beyond existing trends as a result of the proposed project.